

CLAIM AMENDMENTS

Please replace the pending claims with the following claim listing:

- 1-9. (Cancelled)
10. (Currently Amended) A method of synthesizing alanylglutamine, comprising the steps of:
- 1) form active ester by the reaction of 10 mmol N-terminal protected alanine, 10 to 30 mmol of triphenylphosphine and 10 to 30 mmol of hexachloroethane, in organic solvent for 20 minutes to 3 hours, and reaction temperature is -5 to 30⁰C;
 - 2) react the active ester obtained from step 1) with 10 to 30 mmol of glutamine to form the N-terminal protected alanylglutamine, in a liquid mixture made by organic ~~solvents~~ solvent and aqueous solution of inorganic base, wherein the volume ratio of organic solvent and aqueous solution of inorganic base is 0-4, reaction temperature is -5 to 30⁰C, and the pH is controlled at 8.5 to 13;
 - 3) ~~Acidify~~ acidify the reaction mixture of step 2) with inorganic acid to pH≤3.0; and
 - 4) remove the N-terminal protecting group to obtain alanylglutamine.

11. (Currently Amended) The method of synthesizing alanylglutamine according to claim 10, wherein:

1) forms an active ester by the reaction of 10 mmol of N-terminal protected alanine, 15 to 20 mmol of triphenylphosphine and 15 to 20 mmol of hexachloroethane in organic solvent for 1.5 to 2 hours, and reaction temperature is 0 to -10⁰C;

2) react the active ester obtained from step 1) with 15 to 20 mmol of glutamine to form N-terminal protected alanylglutamine, in a liquid mixture made by mixing organic solvent and aqueous solution of inorganic base, wherein the volume ratio of organic solvent and aqueous solution of inorganic base is 0.5 to 2, reaction temperature is 5 to 10⁰C , and pH is controlled at 9.5 to 10.5; and

3) acidify the reaction mixture of step 2) to a pH of 2.0 to 3.0.

12. (Previously Presented) The synthesis method of alanylglutamine according to claim 10, wherein N-terminal protected alanine is N-(O,O-dimethyl) phosphoalanine (DMP-L-Ala), N-(O,O-diethyl) phosphoalanine (DEP-L-Ala), N-(O,O-diisopropyl) phosphoalanine (DIPP-L-Ala), N-(O,O-di-n-butyl) phosphoalanine (DBP-Ala), carbobenzoxyalanine (Z-L-Ala), (para-carbomethoxy) carbobenzoxyalanine (MZ-L-Ala), tert-butylcarbonylalanine (Boc-L-Ala), or 2-(dibiphenyl) isopropylcarbonylalanine (Bpoc-L-Ala).

13. (Previously Presented) The synthesis method of alanylglutamine according to claim 10, wherein the organic solvent used in step 1) is selected from the group consisting of dichloromethane, toluene, tetrahydrofuran, acetonitrile, and 1,2-dichloroethane.

14. (Previously Presented) The synthesis method of alanylglutamine according to claim 11, wherein the organic solvent used in step 1) is selected from the group consisting of dichloromethane, toluene, tetrahydrofuran, acetonitrile, and 1,2-dichloroethane.

15. (Previously Presented) The synthesis method of alanylglutamine according to claim 10, wherein the organic solvent used in step 2) is selected from the group consisting of ethanol, ethyl acetate, petroleum ether, cyclohexane, toluene and dichloromethane.

16. (Previously Presented) The synthesis method of alanylglutamine according to claim 11, wherein the organic solvent used in step 2) is selected from the group consisting of ethanol, ethyl acetate, petroleum ether, cyclohexane, toluene and dichloromethane.

17. (Previously Presented) The synthesis method of alanylglutamine according to claim 10, wherein the inorganic base used in step 2) is selected from the group consisting of sodium hydroxide, potassium hydroxide, sodium bicarbonate, potassium bicarbonate, sodium carbonate and potassium carbonate.

18. (Previously Presented) The synthesis method of alanylglutamine according to claim 11, wherein the inorganic base used in step 2) is selected from the group consisting of sodium hydroxide, potassium hydroxide, sodium bicarbonate, potassium bicarbonate, sodium carbonate and potassium carbonate.

19. (Previously Presented) The synthesis method of alanylglutamine according to claim 10, wherein the inorganic acid used in step 3) is selected from the group consisting of hydrochloric acid, sulfuric acid, nitric acid and phosphoric acid.

20. (Previously Presented) The synthesis method of alanylglutamine according to claim 11, wherein the inorganic acid used in step 3) is selected from the group consisting of hydrochloric acid, sulfuric acid, nitric acid and phosphoric acid.

21. (Previously Presented) The synthesis method of alanylglutamine according to claim 10, wherein the N-terminal protecting group is removed by at least one of trifluoroacetic acid, hydrogen chloride/glacial acetic acid, hydrogen bromide/glacial acetic acid, methyl sulfonic acid, hydrogenation reduction, hydrogen chloride/1,4-dioxane, or hydrogen bromide/1,4-dioxane.

22. (Previously Presented) The synthesis method of alanylglutamine according to claim 11, wherein the N-terminal protecting group is removed by at least one of trifluoroacetic acid, hydrogen chloride/glacial acetic acid, hydrogen bromide/glacial acetic acid, methyl sulfonic acid, hydrogenation reduction, hydrogen chloride/1,4-dioxane, or hydrogen bromide/1,4-dioxane.

23. (Currently Amended) The synthesis method of alanylglutamine according to claim 10, wherein step 2) is accomplished as follows: the active ester obtained from step 1) reacts with glutamine in a stirring liquid mixture containing organic solvent and aqueous solution of inorganic base, and stirring and the condition of ~~about~~ 9.5 to ~~about~~ 10.5 must be maintained in the course of reaction.

24. (Currently Amended) The synthesis method of alanylglutamine according to claim 11, wherein step 2) is accomplished as follows: the active ester obtained from step 1) reacts with glutamine in a stirring liquid mixture containing organic solvent and aqueous solution of inorganic base, and stirring and the condition of ~~about~~ 9.5 to ~~about~~ 10.5 must be maintained in the course of reaction.